

## ABSTRACT

It is an object of the present invention to provide a print head that is usable in a horizontal printer, that is small in size, that is superior in mass production, that can easily perform discharge control, that is excellent in reliability, and that is excellent in practicality to be writable in a state in which a recording medium is not bent. The print head has a discharge control unit. The discharge control unit includes a heating means and a discharge portion. The heating means includes a heat generation portion provided with a heat generation body and a driver IC that controls heat generation of the heat generation body. The discharge portion includes a discharge electrode disposed in accordance with the heat generation body. In the discharge control unit, the heat generation portion and the discharge portion are insulated from each other.

Fig. 1

Ion projection (Light emission)  
Recording medium (Electrostatic latent image carrier)  
Conveying path

Fig. 5

7 Discharge control unit  
4 Head substrate  
5 Discharge portion  
5a Discharge electrode  
13 Heat generation portion  
13a Heat generation body  
6 Driver IC

Fig. 11

13 Heat generation portion  
13a Heat generation body  
Heat selectively  
5a Discharge electrode  
Discharge  
Ion generation (Light emission)

Fig. 13

Ion projection (Light emission)  
Recording medium (Electrostatic latent image carrier)  
Conveying path

Fig. 14

Ion projection (Light emission)  
Recording medium (Electrostatic latent image carrier)  
Conveying path

Fig. 15, Fig. 16, Fig. 17

Conveying direction

Fig. 18

Ion projection  
Printing medium conveying direction